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SAP Aktiengesellschaft

## COMMUNICATION

The European Patent Office herewith transmits as an enclosure the European search report for the above-mentioned European patent application.

If applicable, copies of the documents cited in the European search report are attached.

☐ Additional set(s) of copies of the documents cited in the European search report is (are) enclosed as well.

The following specifications given by the applicant have been approved by the Search Division:

☒ abstract

☐ title

☐ The abstract was modified by the Search Division and the definitive text is attached to this communication.

The following figure will be published together with the abstract:

2

## REFUND OF THE SEARCH FEE

If applicable under Article 10 Rules relating to fees, a separate communication from the Receiving Section on the refund of the search fee will be sent later.





European Patent  
Office

# EUROPEAN SEARCH REPORT

Application Number  
EP 04 10 7056

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	US 5 991 536 A (BRODSKY ET AL) 23 November 1999 (1999-11-23) * abstract * * figures 1,3,4 * * column 1, lines 43-59 * * column 3, lines 15-37 * * column 3, lines 38-54 * * column 3, line 64 - column 4, line 23 * * column 4, lines 11-60 * * column 6, lines 8-44 * -----	1-28	G06F9/44 G06F9/54
A	US 6 363 435 B1 (FERNANDO JOSEPH P ET AL) 26 March 2002 (2002-03-26) * the whole document * -----	1-28	
A	US 6 035 423 A (HODGES ET AL) 7 March 2000 (2000-03-07) * the whole document * -----	1-28	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			G06F
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		21 April 2005	Dieben, M
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 04 10 7056

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
The members are as contained in the European Patent Office EDP file on  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

21-04-2005

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5991536	A	23-11-1999	US 6243763 B1	05-06-2001
			US 6122634 A	19-09-2000
			US 6237142 B1	22-05-2001
			US 5895472 A	20-04-1999
			US 5960199 A	28-09-1999
			US 6418482 B1	09-07-2002
<hr/>				
US 6363435	B1	26-03-2002	NONE	
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US 6035423	A	07-03-2000	US 6269456 B1	31-07-2001
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This application is covered by the extended European search report pilot project at present running within the European Patent Office, applied to all European patent applications filed as first filing and searched on or after 01.07.03. Under this project the EPO issues together with the search report an opinion on whether the application and the invention to which it relates meet the requirements of the EPC. This non-binding opinion is issued free of charge as a service. This opinion may be used as the basis for an informed decision as to whether it is desired to pursue the application further or not.

For further details of this pilot project, the applicant's attention is directed to the Official Journal edition 5/2003. If any further immediate questions or comments arise the EPO Customer Services: +31-70-340 4500 or +49-89-2399 2828 can be contacted.

**The attached opinion reveals that the application or the invention to which it relates appear not to meet the requirements of the Convention** (see comments on enclosed Form 2906).

If the applicant wishes to continue with this application the examination fee must be paid. Where appropriate amendments can be filed to address the objections raised in the opinion, thus shortening the overall procedure. If no amendments are filed, the opinion will be re-issued as the first official communication under Article 96(2) and Rule 51(2) EPC.

If the examination fee has already been paid and the right to the communication under Article 96(1) EPC has been waived for this application, the first official communication under Article 96(2) and Rule 51(2) EPC will be issued promptly.



The examination is being carried out on the **following application documents**:

**Description, Pages**

1-13 as originally filed

**Claims, Numbers**

1-28 as originally filed

**Drawings, Sheets**

1-5 as originally filed

1. The following documents are referred to in this communication, the numbering will be adhered to in the rest of the procedure.

D1: US5991536

2. The application does not meet the requirements of Article 84 EPC, because claims 2,3 and 16,17 are not clear.
  - 2.01 The term *expecting* in claims 2 and 16 is not clear as it fails to specify how this *expecting* is achieved. Formulated as such it is not a technical limitation of the claim. This throws also doubt on *the step of triggering a mechanism if an expected confirmation is not received* in claims 3 and 17 since it is not clear how said trigger is implemented. When is a mechanism triggered in case nothing happens? Although it is also not clear from the description how the trigger is implemented the subject-matter of claims 2 and 3 together appears to define a standard and well-known if-then construction within a method and is therefore interpreted as such.



3 The present application does not meet the requirements of Article 52(1) EPC, because the subject-matter of claims 1, 4-9 and 14,15,18-23 is not new in the sense of Article 54 EPC.

3.01 The subject-matter of independent claim 1 is not new as D1 (referred to within brackets of this paragraph) discloses:

*A computer implemented method for administrating data objects in an information technology architecture comprising a plurality of data objects and a plurality of applications, wherein each application processes at least one of the data objects, the plurality of data objects being subject to changes (D1, abstract), and wherein: entries representative of data objects are registered in a first data structure (D1, col 4, lines 45-60, "The notification manager maintains a list of both observed objects and observer objects...");*

*entries representative of applications are registered in a second data structure, each entry comprising specifying data objects whose changes are relevant for the respective application ; (D1, col 4, lines 11-23, "all knowledge of how to notify the observer objects of changes in the observed objects in the object hierarchy is encapsulated within the notification manager")*

*the method performing the following steps:*

*receiving notifications regarding registered data objects as to changes of the data objects (D1, col 4, lines 49-60, "whenever a change is made to a specified observed object ..., the notification manager is informed"); upon each receipt of a notification,*

*getting changed data from the notifying object (D1, col 4, lines 49-60, "the notification manager interfaces to the object hierarchy , accesses certain status information contained therein ...");*

*checking, among the registered applications, as to whether the change is relevant for the applications, notifying each application about the change if the change is relevant for the application (D1, col 4, lines 49-60, "determines which objects have been modified and then notifies the associated observer objects"); and*

*transmitting the relevant changed data to the application (D1, col 4, lines 49-60, " observer objects are notified ... with information concerning the change" & col*



6, lines 29-44, "notify all observer objects that the attribute A has now the name of 'B' ").

- 3.02 The subject-matter of independent claim 14 is not new as the objections made to corresponding independent method claim 1 apply mutatis mutandis to claim 14. The subject-matter of claim 14 further defines *an agent for administrating changes to data objects* (D1, col 4, lines 11-23, "all knowledge of how to notify the observer objects of changes in the observed objects in the object hierarchy is encapsulated within the notification manager").
- 3.03 The subject-matter of dependent claims 4 and 5 is not new as D1 further discloses: *subobjects* (D1, col 4, lines 24-36, "object hierarchy").
- 3.04 The subject-matter of dependent claims 6 is not new as D1 further discloses: *specifying data objects whose changes are relevant for the respective application comprises receiving a list of fields* (D1, col 6, lines 8-44, "attribute") *whose changes are relevant for the respective application* (D1, col 6, lines 8-44, "... observer objects ... need to be updated to reflect the ... change").
- 3.05 The subject-matter of dependent claim 7 is not new as D1 further discloses: *a step of filtering out data objects whose changes are not to be communicated to an application, prior to the step of transmitting the relevant changed data to the application* (D1, col 4, lines 37-43, "... invokes the appropriate notify function in all correspondingly registered observer objects").
- 3.06 The subject-matter of dependent claim 8 is not new as D1 further discloses: *the step of registering entries representative of applications includes specifying as to which changes of a data object are relevant for the application* (D1, col 4, lines 37-43, "... invokes the appropriate notify function in all correspondingly registered observer objects").
- 3.07 The subject-matter of dependent claim 9 is not new as D1 further discloses: *a customization structure of an agent* (D1, col 4, lines 45-60, "The notification manager maintains a list of both observed objects and observer objects...").





- 3.08 The subject-matter of dependent claim 15 is not new as D1 further discloses:  
*a first input interface to allow for registering the entries representative of data objects* (D1, col.3, line 64, col 4, line 23, "views ... used to interact with the user in the construction of an object hierarchy or its component parts...");  
*a second input interface to allow for registering the entries representative of applications* (D1, col 3, lines 56-63, " a typical observer object is a user interface object, such as a view ...").
- 3.09 The subject-matter of dependent system claims 18-23 is not new as the objections made to corresponding method claims 4-9 apply mutatis mutandis to claims 18-23.
- 4 The present application does not meet the requirements of Article 52(1) EPC, because the subject-matter of claims 2,3,10-13 and 16,17,24-28 does not involve an inventive step in the sense of Article 56 EPC.
- 4.01 As far as the subject-matter of dependent claim 2 can be understood it appears to differ from D1 in that claim 2 further defines: *expecting a confirmation of changes from an application*. However the person skilled in the art would not disregard implementation details such as the step of checking whether a desired result is achieved. It is a choice of design obvious to the person skilled in the art to add this step to the method of D1 and arrive at the method of claim 2 without the need of an inventive step.
- Moreover the person skilled in the art would effortlessly solve the problem of *expecting a confirmation of changes* with the notification manager of D1 by using said notification manager to notify the observed object of any relevant changes to its observing objects.
- 4.02 The subject-matter of dependent claim 3 further differs from D1 in that claim 3 further defines:  
*triggering a mechanism if an expected confirmation is not received*. However the person skilled in the art would not disregard implementation details such as the step of taking appropriate action when desired result is not achieved. It is a choice of design obvious to the person skilled in the art to add this step to the method of D1





and arrive at the method of claim 3 without the need of an inventive step.

- 4.03 D1 appears to read on claim 7 entirely. However the description on page 8 lines 15-21 describes that *not all changes of an object are relevant for each of the registered applications*. Hence it appears that with this interpretation, only those applications associated to a particular data object are notified of a change to said data object if said change is relevant. If, for example, an attribute name change of a particular data object is not relevant to an associated application said application would not be notified whereas it would be notified if, for example, the type of said data object would change. However, the applicants attention is drawn to the fact that even with this interpretation the subject-matter of claim 7 would not involve an inventive step as it is the aim of the method of D1 to inform applications only of relevant changes. Hence the person skilled in the art would avoid unnecessary notification by tuning the granularity of the data objects that can be observed, without the need of an inventive step.
- 4.04 The additional subject-matter of dependent claims 10-12 deals with implementation details such as structuring data, which does not add anything inventive to the subject-matter of the claims to which they refer, in particular, the skilled person in the field of information technology would not disregard obvious implementation details dealing with data representation.
- 4.05 The additional subject-matter of claim 13 does not involve an inventive step as restricting the scope of use to business applications is obvious and, moreover does not add any technical subject-matter. Non-technical subject-matter can not contribute to inventive step.
- 4.06 The subject-matter of dependent system claims 24-27 does not involve an inventive step as the objections made to corresponding method claims 10-13 apply mutatis mutandis to claims 24-27.
- 4.07 The subject-matter of independent claim 28 does not involve an inventive step as D1 further discloses:  
*a computer-readable storage medium comprising program code for performing the*



*method of claims 1-13, when loaded into a computer system (D1, col 3, lines 39-54, "... computer readable medium, e.g. data storage device ...".*

- 5 It is not at present apparent which part of the application could serve as a basis for a new, allowable claim. Should the applicant nevertheless regard some particular matter as patentable, an independent claim should be filed taking account of Rule 29(1) EPC. The applicant should also indicate the difference of the subject-matter of the new claim vis-à-vis the state of the art and the significance thereof.
- 6 In case the applicant intends to file a new set of claims he should take into consideration the following remarks:
- 6.01 Document D1 which appears to represent the most relevant prior art, should be acknowledged in the description (Rule 27(1)(b) EPC).
- 6.02 When filing amended claims the applicant should at the same time bring the description into conformity with the amended claims. Care should be taken during revision as the application may not be amended in such a way that it contains subject-matter which extends beyond the content of the application as filed (Article 123(2) EPC).
- 6.03 In order to facilitate the examination of the conformity of the amended application with requirements of Article 123(2) EPC, the applicant is requested to clearly identify the amendments carried out, irrespective of whether they concern amendments by addition, replacement or deletion, and to indicate the passages of the application as filed on which these amendments are based.

If the applicant regards it as appropriate these indications could be submitted in handwritten form on a copy of the relevant parts of the application as filed.

M.P.Dieben